Appendix A

Preliminary Draft Rapid Response Plan for Aquatic Invasive Species In California

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A. Description of Proposed Teams for Rapid Response to Aquatic Invasive Species

B. Possible AIS Sighting Form

C. AIS Report Form

D. The next draft of the rapid response plan will include an appendix with additional references (hardcopy and websites) for information about rapid response, aquatic invasive species, early detection and reporting of AIS, and appropriate initial contact persons for these topics.

E. If one or more interagency agreements for cooperation on rapid response are completed and approved, a copy of each agreement could be added to these appendices.

Introduction:

Goal: The overall purpose of this plan is to provide a framework for an effective rapid response to the discovery of any aquatic invasive species (AIS) that is new to California or a colony or population of an established AIS that is disjunct from its known distribution in California.

In this document "rapid response" is the eradication or control of an AIS that is only recently discovered and, relatively speaking, is very limited in its distribution. Rapid response is critical when an AIS is discovered that is new to the State, or a specific region of the State, and it has high potential for damaging native species, their associated ecosystems or is likely to have negative impacts on the human use of water resources. Rapid response is the second line of defense after prevention to minimize the impacts of AIS on the environment and economy of California. If a non-native, invasive species is allowed to become established, efforts to control it are typically less successful and more expensive than rapid response measures. The damage caused by an AIS that becomes wide-spread and the efforts to control it, are likely to cause more environmental harm in the long run than a successful rapid response effort.

California does not currently have an official rapid response plan for AIS, and there is not a designated lead agency with overall responsibility for management of AIS. When the need arises, it is unknown if the necessary elements to conduct a rapid response operation will come together or not. If the commitment, abilities and money don't come together, the consequence may be significant environmental and economic problems to deal with in the relatively near future. Even if an *ad hoc* rapid response effort is made, there may not be the level of organization and accountability that would occur if an official plan was being followed. This could lead to a different set of negative consequences such as perceived mismanagement of public funds, lack of compliance with environmental regulations, or bypassing the interests of community leaders.

In response to the threat posed by AIS in California's wildland aquatic habitats, and the lack of an organized plan and funding to address this threat, the development and implementation of a rapid response plan is called for in Chapter 7 (Task 4A1) of the California Aquatic Invasive Species Management Plan (CAISMP)(California Department of Fish and Game, 2006). The CAISMP acknowledges rapid response to AIS in California's wildlands may often require cooperation among a variety of local, State and Federal agencies and organizations, and that formal agreement on a plan, in advance of need, increases the likelihood of responding in an effective manner.

This preliminary draft Rapid Response Plan will be circulated for review to agencies and organizations that are likely to have an interest in rapid response. Based on the comments received, CDFG's Invasive Species Program will revise

the Plan. The goal is to arrive at a plan that can be the basis for interagency agreements to cooperate on rapid response to AIS. In order to finalize, fund and implement the plan, it is hoped that cooperating agencies will assign staff to participate. As long as it is agreeable to the cooperating agencies, the California Department of Fish & Game (CDFG) Invasive Species Program staff will provide coordination for the interagency activities called for in the agreement(s).

Please note that the procedure section of this plan (Section III) is followed by the planning section (Section IV). Some would suggest that the order of these sections should be reversed, but this order is deliberate. The procedure section was placed ahead of "the plan to develop the plan" to emphasize that the objective here is to have a working product.

Both the procedure and planning sections of this document (Sections III and IV), discuss the need to collect data to evaluate how workable and successful the plan is. This rapid response plan is meant to fit into an adaptive management strategy where evaluation can lead to improved procedures.

It is not feasible to plan proactively for every possible species that might become a nuisance in our State waters, hence the need for this generic plan. It stands to reason, however, that a generic plan cannot be implemented as efficiently as a species-specific or location-specific plan. It is important in the near future, therefore, to formulate rapid response plans for individual species or related groups of species that are at high risk of being introduced and becoming destructive. This step is called for in Task 4A4 of the CAISMP.

In order to effectively protect California from the impacts of AIS, California needs to develop a comprehensive early detection system in the near future. This document does not attempt to address this issue, but focuses on what happens after detection of a potential AIS occurs. Since some early detection of AIS takes place currently, even without a formal system, it was thought that the most immediate need was to begin develop a rapid response procedure.

II. Legal Authority for Rapid Response

At the time of this writing, the CAISMP is in draft form. Either as a chapter or an appendix it will include a section titled "Federal, State & Regional Authorities and Activities". This section provides general information on the government agencies and regulations that are involved in the management of aquatic invasive species.

Rapid response activities could potentially require State and/or Federal permits, consultations or agreements related to placing fill or structures into State and/or Federal waters or related to the protection of State or Federally listed species, or other special status plant or animal species. The normal timeline for obtaining the permits issued under these laws may critically delay rapid response efforts. A streamlined regulatory permitting process for the implementation of the Rapid Response Plan will need to be developed and approved by participating agencies. Additionally permission is necessary to work on private and public properties, and clear protocols need to be developed to avoid misunderstandings and make the process as efficient as possible.

In addition to the laws relevant to AIS discussed in the CAISMP there are laws that specifically address taking action during an emergency or under special circumstances. These laws can facilitate the implementation of a rapid response procedure. Examples of this include:

Creation of Emergency Regulations:

Under California Government Code Section 11346.1, rulemaking State agencies, departments, commissions, offices and boards can adopt emergency regulations which can remain in effect for up to 120 days. These are regulations that must take effect immediately for "preservation of the public peace, health and safety or general welfare" and must meet other requirements of that code section. The process for adoption of emergency regulations can be found at the Office of Administrative Law's web site (www.oal.ca.gov/emer_reg.htm). These regulations can include the establishment of quarantine areas or possibly other actions deemed necessary stop the spread of a newly introduced invasive species.

The California Department of Food and Agriculture has specific statutory authority to establish quarantines to protect the State's agricultural industry from pests (Food and Agriculture Code Section 5301). It is possible for an AIS discovered on a nonagricultural site or waterway to have the potential to severely damage crops or water delivery or flood control systems that support agriculture, so the authority to establish a quarantine area may be exercised for that reason.

According to Section 660 of the Harbor and Navigation Code any entity, local or state, that is authorized by law to adopt rules or regulations that govern matters relating to boats or vessels can adopt emergency measures within their jurisdiction as long as they are not in conflict with the general laws of the state relating to those matters. The emergency rules or regulations can be effective for up to 60 days and must be submitted to the Department of Boating and Waterways on or before their adoption. The Department of Boating and Waterways can authorize these emergency rules or regulations to be in effect for over 60 days if it is deemed necessary.

Use of a Pesticide Outside of its Registered Use:

When dealing with species that are new to California, a potential exists that the technical experts participating in a rapid response incident will determine that the best solution is to use a pesticide outside of its registered use or to use a new end use product. Section 18 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) allows States to apply to use a pesticide for an unregistered use for a limited amount of time if the EPA determines that emergency conditions exist (www.epa.gov/opprd001/Section18). Under Section 6206 of Title 3 of the California Code of Regulations (CCR), the Director of the California Department of Food and Agriculture in permitted to apply for a Section 18 exemption when emergency conditions exist. Section 24 of FIFRA authorizes states to register an additional use of a Federally-registered pesticide or a new end use product to meet a special local need (www.epa.gov/opprd001/24c)

According to the U.S. Environmental Protection Agency (USEPA), the use of pesticides in a manner consistent with all relevant requirements of FIFRA is not considered the discharge of a pollutant. It therefore, does not require obtaining a National Pollutant Discharge Elimination System permit under Section 402 of the Clean Water Act (USEPA, 2005).

Experimental Unregistered Use of a Pesticide

Section 6260 of Title 3 of the CCR provides the conditions for obtaining a Research Authorization for the experimental use of a pesticide outside of its registered uses. Research Authorizations are administered by the California Department of Pesticide Regulation.

III. Rapid Response Procedure:

The following procedure is meant to be carried out through an incident command system where participants have been assigned to one or more of the teams described in Appendix A and trained in advance, per the Planning Section (IVJ) of this document. The Planning Section also discusses the need to develop the finer details of the procedure, the organizational structure, the associated contact lists, and the designation of alternates. This last item is so that none of the positions described in the procedure are ever vacant. A flow chart of this rapid response procedure is provided as Figure 1 and an organization chart is included as Figure 2.

The Incident Command System (ICS) was developed to allow staff from different government agencies and organizations to work effectively and efficiently together to respond to a natural disaster. There's a flexibility in the system that allows it to be modified for either small or large incidents. Participants essentially check their individual agency identities at the door and participate as a member of the ICS organization that is dedicated to responding to a particular incident. It relies on the participants clearly understanding their role, working within a known chain of command, being familiar with the roles of the various teams or working groups in the system, and using the official routes of communication. It requires a large commitment to advance organization planning and training, but it has proven to be an extremely effective system. The ICS has recently been integrated into the National Incident Management System. To learn more about it, please visit www.fema.gov/emergency/nims .

Two positions that are frequently referred to in the procedure are the Statewide AIS Coordinator and the Statewide AIS Outreach Coordinator. These positions currently do not exist, but this plan assumes that these positions will be established or that existing positions will be assigned the responsibilities of these positions. The responsibilities of these types of positions are discussed in the CAISMP in chapters dealing with the management framework and actions that need to be taken to achieve the objectives of the Plan.

The procedure that will be followed for a given incident may follow the generic plan provided below or else it will be based a species-specific rapid response plan approved by the participating agencies. As species-specific plans are developed and approved, rapid response team members will be notified of their approval and location on the Internet, and they will be incorporated into AIS rapid response training.

Figure 1. DRAFT General Procedure for Rapid Response Following Detection of New Aquatic Invasive Species Infestation

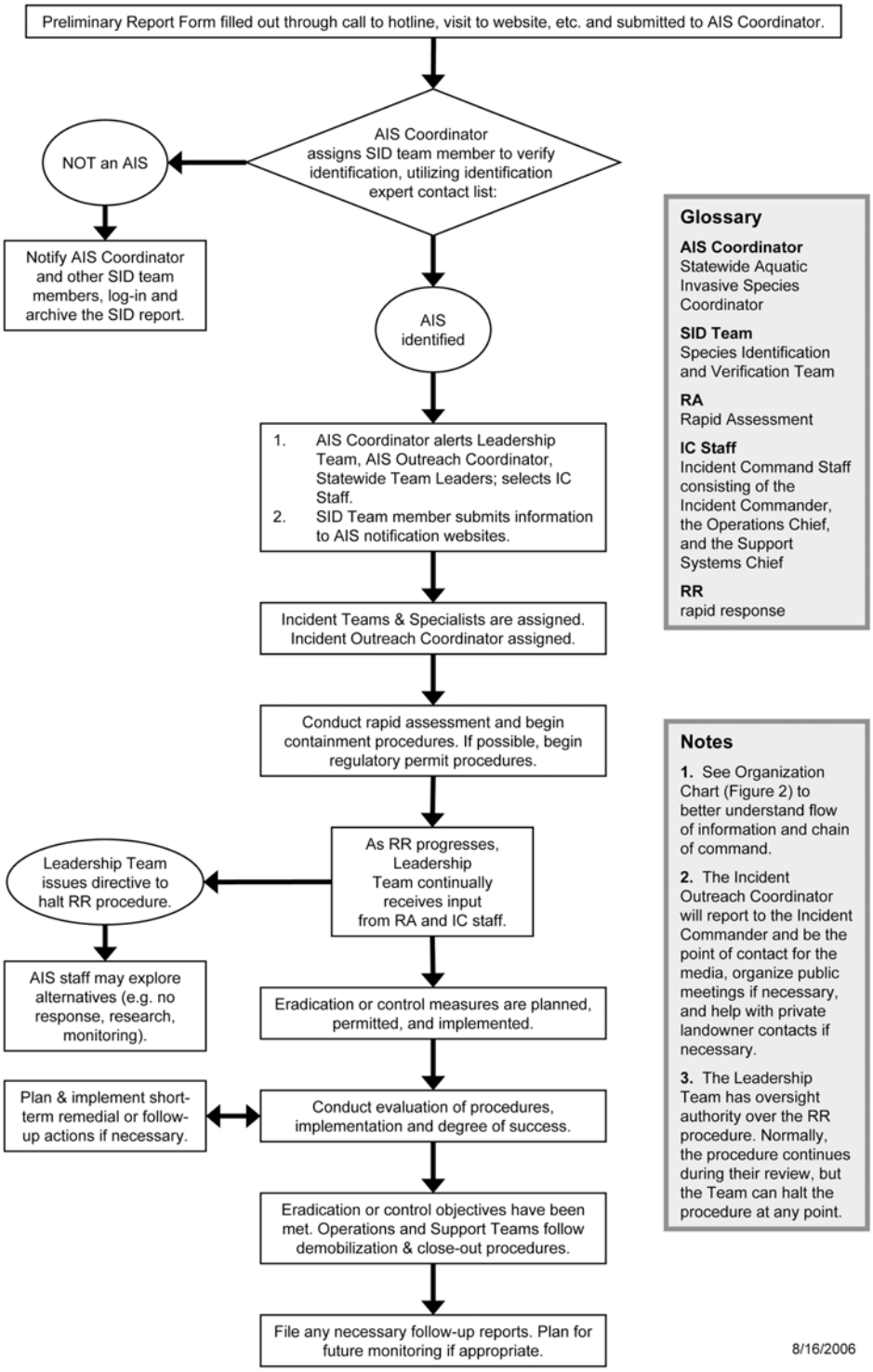
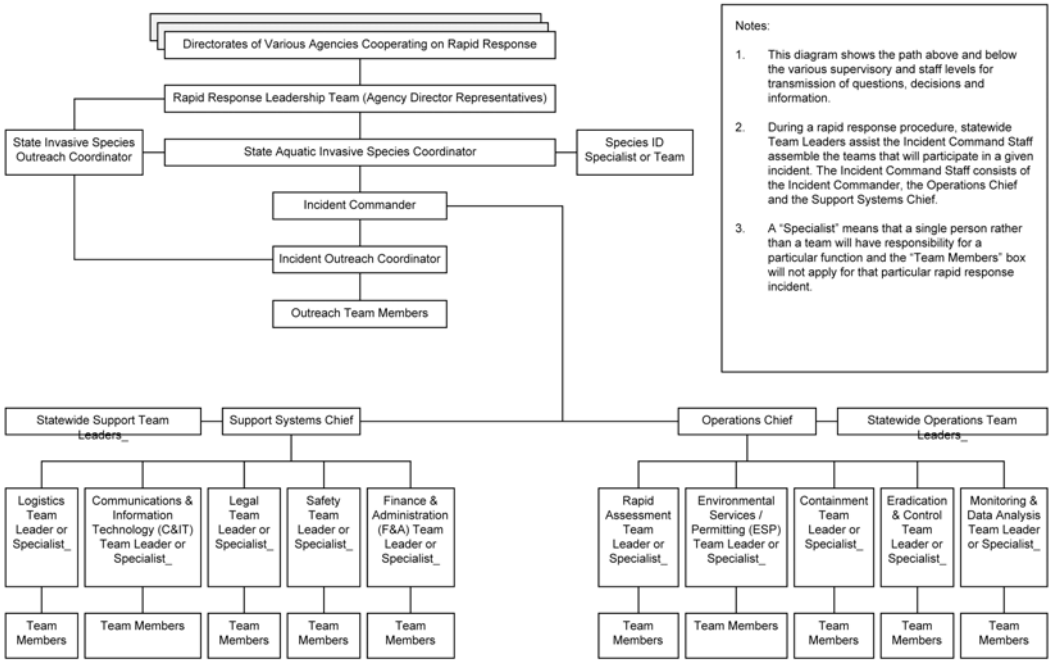


Figure 2. DRAFT Organization Chart for a Rapid Response Incident_



A. Species Identification and Notification

1. A sighting of what is possibly an AIS is reported by phone, mail, e-mail or in-person to a participating agency office, hotline phone number or e-mail address, utilizing an "Possible AIS Sighting" form (Appendix B) to obtain basic information.

2. This information is transmitted to the Statewide AIS Coordinator. The AIS Coordinator contacts an appropriate Species Identification Team member (based on location and life form of the reported sighting) and assigns them to determine whether or not the reported sighting is an AIS.

3. The Species Identification Team member completes a Pest Species Report Form (Appendix C) and makes contacts necessary to fill in gaps of preliminary information. He or she visits the site if it is necessary to confirm the identification, fills in information gaps or obtain voucher specimens. He or she provides a copy of the Pest Species Report form to the Statewide AIS Coordinator.

4. The Species Identification Team member should provide voucher specimens to the appropriate expert to have the identification officially confirmed. There will be a list of experts available to Species Identification Team members. These are experts who have agreed to identify specimens for this procedure and appropriately preserve and catalog them to support the determination of whether or not the subject specimen is an AIS, to assist with future identification efforts, and possibly to support law enforcement actions or benefit future research on AIS. In some cases, the Species Identification Team member may be one of the designated experts.

5. If the identification is negative for an AIS, the Species Identification team member should convey this information to the Statewide AIS Coordinator and notify fellow Species Identification Team members that the report occurred. The report should be logged and archived in a central database, and no further action is necessary.

6. If the identification is positive, the Species Identification team member will notify the State AIS Coordinator who will use an approved set of criteria to determine whether or not to initiate the next steps in the rapid response procedure.

7. If the identification is positive the Species Identification team member will provide the necessary information to the relevant invasive species notification sites, databases and e-mail lists. Team members will have a list of notification recipients.

8. It is the responsibility of the Species Identification Team member to follow-up and make sure that the Rapid Assessment Specialist or Team Leader has received a copy of the Pest Species Report Form and to update the information provided to the AIS notification sites or data bases during or after the rapid response procedure as appropriate, to ensure that complete and accurate information is provided.

B. Activate Command-Level Participants

1. If the information obtained about the infestation meet the criteria for initiation of the rapid response procedure, the Statewide AIS Coordinator will coordinate with regional agency offices and Statewide Rapid Response Team Leaders to quickly fill, at least on an interim basis, the positions of Incident Commander, Operations Chief and

Support Chief. These three positions are referred to collectively as the "Incident Command Staff". The Incident Commander will be the overall supervisor and coordinator for the incident. For a detailed description of the responsibilities of an Incident Commander please visit www.training.fema.gov/EMIWeb/IS/is100lst.asp . The Operations Chief, Support Services Chief, and the Incident Outreach Coordinator report to the Incident Commander and the Incident Commander reports to the Statewide AIS Coordinator.

2. The Statewide AIS Coordinator will notify members of the Leadership Team of the need to initiate the rapid response procedure. This is considered the official notification to the signatory agencies. Members of the Leadership Team will notify the directorship of their respective agencies. The Statewide AIS Coordinator acts as the point of contact between the Incident Commander and the Leadership Team.

3. The Statewide AIS Coordinator will notify the AIS Outreach Coordinator, who will confer with the Incident Commander and other regional management and staff sources to assess Outreach needs. The AIS will either act as the Incident Outreach Coordinator or assign one of the Outreach Team to that role. If the incident requires multiple outreach staff, the AIS Outreach Coordinator will assemble an outreach team for the incident. The Incident Outreach Coordinator will report to the Incident Commander.

4. Either during or following the Rapid Assessment process discussed below, the Leadership Team will confirm the need to proceed with interagency rapid response procedures or determine a rapid response is not appropriate and halt the procedure. During a rapid response procedure, the Leadership Team can choose to confirm or reassign the Incident Commander, Operations Chief and Support Services Chief positions. The AIS Outreach Coordinator can assist the Leadership team in the communication of their decisions to participating agencies and other interested parties. A set of approved criteria will provide guidance to the Leadership Team in making a decision to continue or halt a rapid response procedure.

C. Activate Operations and Support Teams:

1. The Operations and Support Services Chiefs will obtain assistance from the Statewide Rapid Response Team leaders to assemble the specialists and teams that are necessary to respond to the incident and appoint the Incident Team Leaders (with the exception of the Outreach team, which will be assembled as described above). It is desirable to select team members who are based nearest the incident, but other criteria, such as expertise with certain taxa, may supercede this. If the Chiefs cannot reach a particular Statewide Team leader and immediate participation from that team is needed, the Incident Commander can directly contact the supervisors of the subject team members to get support in responding to this incident as soon as possible. If a team is assembled without input from the Statewide Team Leader, the Incident Commander will appoint the Incident Team Leader for that team.

2. The Incident Team Leaders coordinate with one another and the Chiefs, in order to be as effective as possible. With input from their team members, they delegate responsibilities within their team and provide oversight and quality control of the work. They act as the liaison between the team and the Operations or Support Services Chief to report on progress, or request direction or assistance.

3. To develop the teams discussed above, the Incident Command Staff and the Statewide Team Leaders will be working from staff directories of people who are approved to be assigned to Rapid Response efforts. This directory will be organized by area of expertise and geographic location. A similar directory will be used to facilitate the sharing of information, equipment and supplies among cooperating agencies and organizations during a rapid response procedure.

D. Rapid Assessment:

1. The Rapid Assessment Team obtains contact information for pertinent landowners, land managers, holders of water rights, water users and jurisdiction over the waterbody(ies) involved. If it is necessary to enter private property to conduct rapid response work, they need to obtain permission from the landowner(s). Outreach and members of other Support Teams may be called upon to assist with the items in this task.

2. The Rapid Assessment Team and Monitoring and Data Analysis team need to coordinate to collect information on the AIS infestation and the habitat it is found in. Important information includes (but may not be limited to) delineating the extent of the infestation, demographic information on the AIS poplulation, pertinent water quality, hydrologic and substrate characteristics, associated plant and animal species, presence of sensitive species (listed, Calif. fully-protected, etc.) determining the vector that caused the introduction and potential routes of spread. Conduct background research, if necessary, on the AIS and potential control measures.

3. During the Rapid Assessment phase and during the remainder of the incident, Outreach Team member(s) may be called by the Incident Commander upon to participate by drafting official letters/memos regarding this incident, keeping interested parties appraised and educated about this situation, gathering local contact information, obtaining access to private lands, and acting as the contact for media.

4. During or following the Rapid Assessment, the Incident Command Staff and Statewide AIS Coordinator should use approved criteria and the information obtained from the Rapid Assessment to develop a recommendation on whether or not to continue the Rapid Response Procedure. The Statewide AIS Coordinator will present this recommendation to the Leadership Team who will have final authority to order that the Rapid Response procedure be continued or stopped. The Leadership Team will be provided with the same information and criteria used by the Incident Command Staff and the AIS Coordinator. During this period of evaluation, assessment, containment, response planning and permitting will continue. Those activities will not stop during the Leadership Team's deliberation, unless the Leadership team expressly orders the activity to stop.

E. The Containment Team takes Action to Prevent Spread of the AIS. Examples Include:

1. Temporarily quarantine waterbody(ies) that contain subject AIS

   a. As discussed in the legal authority section above, rulemaking State agencies, departments, commissions, offices and boards can establish a quarantine through emergency regulation.

   b. Local governments can close waterbodies under their jurisdiction.

   c. The State legislature can establish a quarantine through emergency legislative procedures.

   d. Obtain input from the Safety team leader if health and safety issues are relevant to delineation of a quarantined area.

   e. In addition to sites that are known to contain the subject AIS, consider whether it is appropriate to quarantine other waterbodies where it may have been introduced.

2. To the extent possible, locate boats that recently used the infested waterbody and survey boaters about previous and subsequent waterbodies visited.

3. Inspect and wash potentially contaminated boats, vehicles and equipment

4. Inspect other waterbodies used by potentially infected boats

5. Post signs alerting public to the problem and how to minimize the risk of spread the subject AIS.

6. Make sure the potential for introduction from nearby commercial operations (shipping, bait shops, aquaculture, aquarium shops) is removed or minimized to the extent possible.

F. Public Outreach:

1. The Outreach Team will prepare and, with the approval of the Incident Commander, implement a plan for public outreach and education needs for the incident.

2. If requested by the Incident Commander, the Outreach Team will obtain input from locally interested parties through organizing and facilitating meetings or workshops.

3. If the Incident Outreach Coordinator is someone other than the statewide AIS Outreach Coordinator, the Incident Outreach Coordinator will keep the statewide AIS Outreach Coordinator informed of relevant decisions, activities, problems, etc.

4. The Incident Outreach Coordinator will act as the point of contact for the media and obtain approval from the Incident Commander prior to releasing information to the media.

G. Prepare an Incident Action Plan:

1. The Eradication or Control Team will utilize information provided by the other teams and the Incident Command Staff, input from various interested parties, and possibly seek advice from outside experts to develop an Incident Action Plan (IAP). This will include a statement of measurable goals and objectives (eradication or otherwise) for this rapid response effort. It will outline the steps to be taken to carry out the rapid response strategy from the beginning through wrapping-up and closure of the operation. It will explain what the anticipated operational and support needs will be. To develop the IAP, the Eradication and Control team will need to take into account environmental, regulatory, logistic, economic, health and safety factors as well as other concerns that the surrounding community may have.

2. The Eradication and Control Team will need to keep the Environmental Services/Permitting team appraised of the information they receive and the eradication or control options they are considering in order to have their input and assistance on regulatory issues (e.g. obtaining permits or letters from federal, state or local agencies that might be necessary).

H. Approve and Implement the Incident Action Plan

1. The Control and Eradication team leader will brief the Incident Commander, and the Operations and Support Services Chiefs on the planned course of action and what their operational and support needs will be. The Incident Commander can provide interim approval to begin implementation of the IAP.

2. The Incident Commander will present the IAP to the Leadership Team, which has oversight authority. They can confirm the Incident Commander's approval of the IAP and allow it to go forward as is, request changes to the response plan, or halt it entirely.

3. Carry out the Incident Action Plan to completion.

I. Prepare a Demobilization Plan

1. During the Rapid Response procedure, the Operations and Support Services Chiefs will be responsible for developing a demobilization plan. The purpose of the demobilization plan is to assure that all participants understand their role in an orderly, safe and efficient demobilization of incident resources as rapid response procedures are completed. Equipment and supplies must be returned to appropriate locations, time and cost accounting reports must be completed within required timeframes, and any other required progress and final reports must be prepared and submitted. The Statewide AIS Coordinator will direct the Incident Command Staff on

what follow-up reports will need to be prepared for the rapid response procedures, in order to comply with permits or funding requirements.

J. Monitor the Implementation of the Rapid Response Plan and the Incident Action Plan:

1. The Monitoring and Data Analysis Team will use questionnaire forms (to be developed in advance of need) to document how the rapid response plan and incident action plans are implemented. For example: Where, if any, did deviations from the written plans occur? What were obstacles both within and outside of the plans to their implementation? What facilitated implementing the plans? These evaluations will be conducted to improve future versions of the Rapid Response Plan and Incident Action Plans.

K. Monitor the Outcome of the Incident Action Plan

1. The Monitoring and Data Analysis Team will monitor and evaluate the effacacy of the treatment(s) used in the IAP to achieve its stated goals and objectives and prepare a summary report based on their evaluation. If the control or eradication measures are procedures that require months or years to implement (e.g. hand-removal, or need to wait for a certain stage of growth or time of year), these evaluation reports may take the form of a monthly or annual progress report.

2. If the treatements were not successful or an acceptable level of progress is not being made, the Eradication or Control Team will evaluate the potential for remedial measures to improve the results. If there is a strong possiblity for improvement, the Eradication or Control team will propose a Remedial Action Plan. They will present the results of their evaluation to the Incident Commander, the Operation and Support Systems Chiefs and the statewide AIS Coordiator. The AIS Coordinator will present the results to the Leadership Team.

L. Remedial Actions and Longer-Term Follow Up Work

1. The AIS Coordinator can give initial approval for the assembled rapid response teams to implement a remedial action plan. This approval can be confirmed or retracted by the Leadership Team.

2. Remedial actions and their results will be montiored by the Monitoring and Data Analysis Team.

3. If longer-term actions are necessary, the Incident Team Leaders, with oversight from the Incident Command Staff, will work together to develop a follow-up plan that will be submitted to the Statewide AIS Coordinator. Follow-up actions might include research on the subject AIS or methods for its detection or control, further monitoring of the incident site or of nearby or similar areas. Follow-up may also include proposed revisions to the Rapid Response plan.

M. Operations and Support Teams will conduct activities necessary to document on-going operations and eventually close-out the rapid response operation.

1. Implement the demobilization plan described in step above. The work will be carried out by the Incident Teams and Specialists with oversight and coordination from the Incident Command Staff. Reports will be submitted to the AIS Coordinator for approval and appropriate distribution.

IV. Planning for Rapid Response:

A. Revise the Rapid Response Plan

1. The Department of Fish and Game (DFG) invasive species staff will circulate the draft Rapid Response Plan for review and comments within DFG, to staff at agencies who work on AIS, the Non-native Invasive Species Advisory Council (NISAC), and the California Biodiversity Council's (CBC) Rapid Response working group. The plan will be revised based on this input. The goal is to arrive at a plan that can be the basis for interagency agreements to cooperate on rapid response to AIS.

B. Agencies Enter Into a Memorandum of Understanding or Similar Instrument to Cooperate on Rapid Response Activities

1. The DFG Invasive Species staff will work with the CBC Rapid Response working group to encourage State and Federal agencies that are likely to be involved in rapid response to AIS infestations to enter into Memoranda of Understanding, Implementation Agreements or similar instruments that may be necessary for interagency cooperation on the implementation of the Rapid Response Plan.

2. Either by utilizing an existing group, such as the NISAC or CBC Rapid Response working group and/or through the establishment of a new group, the signatory agencies will assign representatives to participate in an interagency team that focuses on the planning and implementation of the Rapid Response Plan.

C. Funding

1. This Plan cannot be implemented without an adequate amount of stable, dedicated funding. Agencies that are signatory to the Rapid Response agreement(s) should coordinate efforts to pursue funding options for Rapid Response program development, training and implementation. Organizations and industries that have a vested interest in successful Early Detection and Rapid Response systems could participate in the development of funding sources. Examples of sources to consider include:

   a. A permanent funding source (or sources) maintained solely for rapid response actions. Without this, rapid response may not occur or may only occur by redirecting funds on short notice from other important programs. Examine the feasibility of a user-fee system, based on vectors for AIS introductions. This would be similar in concept to fees paid by the shipping industry for ballast water inspections or similar to fees paid by the petroleum industry for a oil spill response program. Study methods used by states that already have dedicated funding for rapid response.

   b. Private/public partnerships for supporting rapid response efforts in the form of equipment, supplies, personnel or funding.

   c. One-time grants for specific planning or research projects related to rapid response.

D. Streamline Permit Processes for Rapid Response

1. DFG Invasive Species Program staff will coordinate with staff from relevant agencies to investigate and pursue the possibilities for streamlining the regulatory permit processes that might be required for rapid response measures. The measures necessary to comply with streamlined permitting can be incorporated (by appendix, if necessary) into the final version of the Rapid Response Plan.

E. Finalize the Rapid Response Plan

1. The CDFG Invasive Species staff will coordinate with cooperating agencies staff in finalizing the details of the Rapid Response Plan's organizational structure and procedures. Among other things, this work will include:

a. The development of information that is needed to help cooperating agencies to determine who will serve on rapid response leadership, organizational and support teams (description of duties, time commitments, etc.).

b. The development of a procedure to designate and prepare potential emergency alternate staff for Statewide positions (i.e. AIS Coordinator, AIS Outreach Coordinator, State-wide Team Leaders, Leadership Team members). This needs to be done so that the Plan can be implemented efficiently and capably even if individuals who typically fill key roles are unavailable.

c. The various agency representatives will work together, and within their own agencies to identify potential statewide team leaders and team members and work to obtain approval for identified staff to participate on one or more of the Rapid Response Teams (i.e. staff the Plan so that it can be implemented). Develop a statewide rapid response staff directory.

d. Develop a directory of Rapid Response information, equipment and supply resources among cooperating agencies and a protocol for sharing resources.

e. Develop a protocol for requesting assistance and resources from outside the signatory group of Rapid Response cooperators. Include protocol in the rapid response training program.

f. Develop a protocol for responding to a private entity or local government agency that may want to conduct a rapid response procedure under their direction, but requests assistance or permits from one or more agencies that are signatory to the statewide Rapid Response Plan. Include this protocol in the rapid response training program.

g. Develop criteria for the AIS Coordinator and Leadership Team to use in deciding whether to implement the Rapid Response procedure. If a rapid response procedure is initiated by the State AIS Coordinator, what process should the Leadership Team use to either confirm or override that decision (e.g. Should they document what information sources they considered? Should they reach their decision via consensus or majority vote?)? It should also be determined whether there will be one set of criteria that is used to initiate the Rapid Response procedure

and a different set of criteria that is used after the Rapid Assessment to determine whether or not the Rapid Response procedure should continue.

6. Statewide team leaders should work with their team members to plan how they will carry out the tasks in the Plan that their team is responsible for. Analyze possible scenarios to see what may work well or cause problems in advance of need. Assess whether certain predictable conditions are likely to increase the likelihood of early detection and rapid response so that team members can begin to prepare in advance, (e.g. an especially low tide). As mentioned in the Training section below, running rapid response drills in regular work conditions will help with fine-tuning the Rapid Response Plan. Develop checklists, potential procedures for collecting and analyzing data and design data forms. These may have to be modified for any given rapid response incident, but it will be more efficient than starting to address these questions from scratch during an incident. Identify what supply and equipment needs are likely to be.

7. "Dry lab" pre and post treatment monitoring data. Conduct a trial analysis to see if the monitoring methods will actually answer whether rapid response objectives are being met. Modify data collection design and methods if necessary, so that information collected during rapid response is more likely to be useful.

8. Consider whether information should be collected in a particular way in order to be compatible with existing AIS databases? For example, the North American Weed Management Association has a list of required elements for weed mapping projects (www.nawma.org).

9. Per Task 4A6 in Chapter 7 of the CAISMP, research whether it would be desirable and feasible to develop emergency contracts with private businesses for rapid response work or monitoring.

10. Task 4A2 in Chapter 7 of the CAISMP calls for the development of a formal centralized system for AIS reporting.

F. Future Revisions of the Rapid Response Plan

1. Because of what is learned through evaluating the Plan's effectiveness following rapid response operations, scientific research, and technological development there will need to be periodic revisions of the Rapid Response Plan. Revisions may also be required due to changes in environmental regulations. The interagency agreement(s) to cooperate on rapid response should include a procedure for making revisions to the Plan.

2. The Statewide AIS Coordinator will be responsible for ensuring that adopted changes to the Plan are promptly circulated to rapid response team members and addressed in future training activities.

3. The Statewide AIS Team Leaders will be responsible for keeping their team rosters accurate and up-to-date and providing updated rosters to the Statewide AIS Coordinator for circulation as necessary.

4. The Statewide Species Identification Team Leader, with oversight and support from the statewide AIS Coordinator, will work with the Species Identification Team to

regularly review and update the lists of contact persons, databases and websites related to their role in rapid response (i.e. experts on species identification, and AIS notification sites).

G. Species-Specific Plans

1. CDFG Invasive Species Program staff will work with interagency AIS coordination groups to identify and prioritize AIS that pose a serious threat to aquatic habitats and are likely to be eradicated or contained by rapid response measures if they are introduced. Agencies that cooperate with rapid response should then work together to develop rapid response plans that target one or more of these species. The species-specific information contained in this type of a response plan should allow it to be implemented more efficiently than a generic response plan. The development of species-specific rapid response plans is called for in Section 4A4 of the CAISMP.

H. Training

1. Agencies that agree to cooperate on AIS rapid response need to cooperate on the development of a training program and then train the employees who are likely to be involved in rapid response activities. All rapid response participants need to be informed of the how the rapid response plan works. They need to know what the structure and organization of the system is and what the various roles and responsibilities are. They may need specialized training related to the duties of the rapid response team(s) that they are assigned to. It is likely that many aspects of ICS training programs already in existence can be modified to be used in rapid response training.

2. Rapid response manuals should be developed to facilitate training and to use as a reference during rapid response incidents. They will need to be updated periodically to stay curent on the technical, administrative and logistical aspects of the rapid response plan. Specific manuals may need to be developed for certain types of species or vectors (ways in which AIS are introduced and spread) or for specific functions (species removal, data collection, administration, public outreach, etc.).

3. Training manuals should be available on-line.

4. Training should include AIS rapid response drills using a variety of scenarios and locations around the State. This will also assist in fine-tuning the rapid response plan.

5. The Statewide Eradication or Control Team Leader should identify team members who may need to obtain and/or maintain a pesticide control advisor or applicator's license and if necessary, assist team members in obtaining the required training.

I. Education and Outreach

1. In Chapter 7 of the CAISMP, Task 1A6 calls for creating an AIS Outreach Coordinator position. In advance of need, the AIS Outreach Coordinator and outreach staff from participating agencies must establish a plan on how to conduct outreach to local communities, interest groups and the media during rapid response procedures.

   a. Community and interest groups can assist or hinder rapid response efforts based on their knowledge and perception of the situation. Involving them as stakeholders in the process is important to the success of dealing with the emergency at hand and it will hopefully build trust and cooperative relationships that will benefit present and future operations.

   b. Private or public organizations who are not signatories to this plan may conduct rapid response procedures on their own. They may request support or input from State or Federal agencies that are participants in this plan. It would be proactive to outreach to organizations or local governments that are likely to make these requests and let them know how we can best be of assistance.

2. Ideally prior to the need for a rapid response, the AIS Outreach Coordinator and other appropriate staff within cooperating agencies, should provide education to communities located near waterbodies about AIS, early detection and rapid response. Outreach staff should also obtain input from local communities about their needs and concerns related to rapid response and provide that information to State and Federal agency staff that are involved in planning for rapid response. Ideally local government, community leaders,and the State and Federal agency staff will have a mutal understanding about the types of actions that can take place during a rapid response procedure.

3. Within the cooperating agencies, staff who supervise employees that are on rapid response teams should be made aware that rapid response work can potentially supersede other projects on very short notice. Supervisors and employees who are on rapid response teams should discuss in advance how they plan to handle this potential source of disruption.

J. Research

1. Agencies and organizations that agree to cooperate on rapid response should work together through various AIS working groups, professional and environmental organizations, and commercial interests to promote research that can specifically improve or promote rapid response efforts. Examples of useful research topics include: the biology of particular AIS or groups of species, methods for public outreach and education, and AIS control methods.

2. If it is feasible to get reasonably reliable, precise information, it would be worthwhile to study the environmental and economic benefits and costs of rapid response efforts versus the benefits and costs of not conducting rapid response. This may help governments decide how much to invest in rapid response measures.

3. Since this document only addresses rapid response, this discussion does not address research topics related to other aspects of the management of AIS (e.g. early detection methods, control measures for established AIS species,

etc.). This broader range of AIS management topics is discussed under Objective 7 within Chapter 7 of the CAISMP.

K. Rapid Response Prior to a Final Plan

1. This section addresses the question: Are there steps that can be taken to be better prepared to implement a rapid response effort while a formal plan is going through the review and approval processes?

a. The Directors of the appropriate agencies could sign an interim MOU, directing their staff to participate in rapid response planning and implementation if a new AIS introduction is discovered prior to the approval of the final plan.

b. Management staff could identify and pursue necessary approvals for potential interim funding sources for implementing a rapid response program.

c. Management level staff from cooperating agencies could informally agree upon an interim strategy regarding roles and responsibilities should a AIS introduction be discovered.

d. Management level staff from cooperating agencies could discuss how, in the absence of a formal streamlined permitting process, their staff could work within the existing regulatory permit programs to facilitate carrying out a rapid response operation and direct staff to follow through on these interim measures. For example, DFG can develop a standard protocol for issuing a letter of permission to conduct rapid response activities.

e. Management level staff could assign employees to interim rapid response teams so that there are standing teams if needed.

f. The CDFG Invasive Species Program will compile lists of contacts for rapid response, including interim teams, identification experts and notification sites.

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Appendix A:

Proposed List of Teams for Rapid Response to Aquatic Invasive Species

Traits Common to All of the Teams Described Below:

These are standing teams whose members can be called upon to work together to rapidly respond to a newly discovered Aquatic Invasive Species (AIS) infestation. They work within an incident command organization and procedure, very similar to the systems used to respond to wildfires or hazardous material spills. Participants may serve on more than one team. On some incidents, a single person may be able to fulfill the team's role and will be referred to in the ICS organization as a "Specialist" (e.g. instead of a "Species Identification Team", a particular incident may only require a single "Species Identification Specialist").

Each team has a Statewide Team Leader who coordinates training and preparation among the team members. Teams will consist of people located throughout the State with the expertise necessary to fulfill a particular team's role during an AIS rapid response incident. Ideally, rapid response measures can be carried out by representatives from each of the teams that are based closest to the incident.

Team members receive training in the rapid response organization, responsibilities and procedures. They will receive special training in their particular roles and participate in mock rapid response scenario drills. Teams must develop procedures and tools for carrying out their roles as efficiently and effectively as possible in advance of need.

During a rapid response incident, members of a team that contains multiple people will report to an Incident Team Leader (e.g. The Containment Team Leader or the Information Technology Team Leader). The team leaders (or Specialists, for functions that are being filled by one person) report to either the Operations Chief or the Support Services Chief depending on whether their team is listed as an operations or support team below. The Operations Chief, the Support Services Chief, and the Incident Outreach Coordinator report to the Incident Commander. The Incident Commander reports to the Statewide AIS Coordinator who serves on the Leadership Team.

Leadership Team:

The leadership team includes an upper-level management representative from each of the agencies that have formally agreed through a Memorandum of Understanding or similar instrument, to cooperate on rapid responses to combat AIS infestations. All Leadership Team members are expected to participate in the process of approving policy or planning decisions with respect to rapid response. However, during a particular rapid response incident, the Leadership Team members will be expected to participate only if the department or agency they represent is likely to have a role in responding to that incident. For example, if the California Department of Parks and Recreation (DPR) has agreed to cooperate in implementing the Rapid Response Plan, but a particular incident does not conceivably involve DPR staff or property, their Leadership Team representative would not be expected to participate during that particular incident.

This team gives the go-ahead to continue an initiated rapid response procedure and provides the support of leadership level staff to the effort. The leadership team can request participation from State, Federal or local agencies. It has oversight authority over the decisions made by the Incident Commander and can halt an initiated rapid response procedure. It can reassign the Incident Commander, Operations Chief and Support Services Chief if the consensus of the Leadership Team is that it is in the best interest of the rapid response effort.

The Statewide AIS Coordinator provides technical expertise and coordination for the Leadership Team. He or she also acts as the Leadership Team contact person for the Incident Commander during a rapid response effort.

Operations Teams:

"Operations Teams" refers collectively to the technical (mostly scientific) teams that collect information, develop the technical aspects of the Incident Action Plan and execute the approved course of action.

Species Identification Team:

Members of this team receive information about possible AIS sighting from a variety of sources (phone hotlines, on-line forms sent from a website, direct contact from agency staff or the public, etc.). Utilizing a form developed for this purpose, Species Identification Team members make sure all the information and voucher specimens necessary to identify the subject species, and other information that the Rapid Assessment team needs in order to proceed, are collected. Team members need to either be an expert who can officially identify certain species for rapid response purposes or someone who is responsible for providing information and voucher specimens to the appropriate expert for identification. Through the procedure described in the Rapid Response Plan,

this team is the link between an early detection program and a rapid response program. Among other tasks, this includes submitting information to AIS websites and databases.

Rapid Assessment Team:

This team collects baseline data to characterize the infestation, collects spatial data and any other information necessary to make the best choice possible for eradication or control methods. They conduct background research on species, vectors and control options if necessary information is not at hand. This team should also include a member or members trained in obtaining information on land ownership, water rights, water users, jurisdiction over the waterbody(ies), and obtaining permission to enter private property.

Containment Team:

This team is responsible for efforts to prevent further spread of an AIS once it is discovered. A number of potential strategies are listed in the Rapid Response Plan, one of which is the establishment of a quarantine area. This will potentially involve work with other teams (e.g. Legal, Safety, and Outreach) and State or local government representatives that have the authority to issue an emergency quarantine. The team should include law enforcement staff to implement the quarantine.

Eradication or Control Team:

This team utilizes information from the other rapid response teams and locally interested parties to propose the eradication or control goal and objectives. They develop an Incident Action Plan to achieve the goal and objectives. This plan may be subject to further input and review from local interests. Once the plan is approved by the Leadership Team and the Incident Commander confirms that all the necessary preparations are completed, members of the Eradication and Control team implement the Incident Action Plan. They can obtain assistance from the other teams through coordination among the team leaders and the Incident Commander.

Environmental Services/Permitting (ESP):

Through their team leader, the ESP Team makes recommendations to the other team leaders and the Incident Commander regarding any federal, state or local permits, emergency regulations (other than quarantine), letters of permission, granting of exemptions, etc. that might be necessary and pursues obtaining them. This team may include, or work closely with, members of the Legal Team.

Monitoring/Data Analysis Team:

This team provides expertise to the Rapid Assessment and Eradication or Control Team Leaders so that useful information will be collected as efficiently as possible. For example, the work of this team may ensure that data collected during Rapid Assessment can legitimately function as baseline data to later evaluate the methods used by the Eradication or Control team. In advance of need, this team should work with the Rapid Assessment Team and the Eradication and Control Team to develop some model strategies or guidelines for collecting qualitative and quantitative information on rapid response activities. The purpose of these strategies or guidelines will be to help team members efficiently collect information during an incident that will help them: 1) make the best treatment decisions possible and 2) assess the effects of the treatments. This team should also work with the others to develop model data forms based on the strategies and guidelines they develop.

Because the collection of data that is suitable for statistical analysis will be desirable in some situations, this team should include one or more biostatisticians that can provide "in-house" consultation on this matter. They may provide assistance with data collection in the field during Rapid Assessment or after eradication or control treatments have been conducted.

Support Teams:

"Support teams" refers collectively to teams whose work provides support that is necessary for the operational teams to carry out their tasks.

Legal Team:

Members of this team need to be aware of rapid response procedures and potential legal ramifications in order to provide advisement as needed. They will likely be called upon to review any special permits or agreements that may be necessary.

Safety Team:

The Safety Team works with the leaders of the other teams and monitors the incident to ensure work is done in a manner that protects the health and safety of participating staff and the public. They may provide input on delineation of a quarantine area.

Logistics Team:

Staff who will provide support to meet incident needs in terms of resources and services required to accomplish the RR objectives (e.g. arrange for travel

and lodging of rapid response staff, purchasing or renting equipment or supplies, providing clerical support).

Finance and Administration Team:

Monitors costs for each RR incident and provides accounting, procurement, time recording and cost analyses.

Communication and Information Technology Team:

This team will supply support to the other teams in their use of communication and information technology to conduct their work.

Outreach Team:

The Statewide-leader for this team will be the AIS Outreach Coordinator called for in Task 1A6 of the CAISMP. Members of this team work with leadership and technical staff to provide productive outreach and education to local government agencies, the general public, the media, and interest groups. They provide outreach to individual private landowners or homeowners groups whose input and cooperation may be necessary for assessment and treatment of an invasive species infestation. Outreach team members could potentially assist the leadership team and any of the Operations Teams. They need to become familiar with those functions and be prepared to provide the potential outreach needs for each of the teams. The Outreach Team should include members who are trained in how to organize and facilitate public meetings.

Appendix B:

Possible AIS Sighting Form

(Preliminary Draft)

The reporter may not be able to provide all of the information requested below, but please fill in as many of the information fields as possible.

File Number: Date of Sighting:

Reporter's First and Last Name:

Reporter's Phone Numbers: Home: Work:
Cell:

Reporter's E-Mail Address: Reporter's Mailing Address:

Type of Organism Observed (as specific a descriptive label as possible (e.g. submerged plant, shellfish, etc.):

Description of size, color, shape, and other distinguishing characteristics:

Approximate number of individuals or area they occupy:

Location of sighting:

Directions and description of nearby landmarks:

Were any photographs taken or specimens collected? If so, where can they be obtained?

Landowner or Land Manager:

Possible Source of Introduction:

Name and Contact Information of Person Filling Out This Form:

Appendix C: AIS Report[1] (Preliminary Draft)

To be filled out by Species Identification Team member following up on a preliminary report of a possible AIS sighting (see form in Appendix B). Future draft of the AIS Report will be expanded to two pages to lessen the crowding of information on the form.

Species Name: Report Tracking #

Team member's Name: Phone Number (s)
Agency: Address: E-mail address:

Reporter's Name:
Reporter's Phone Number(s):
Reporter's e-mail: Date of Pest Sighting:

If identification verified by expert, who provided the verification?
Verifier's phone number(s) E-mail:

Location of voucher specimens:

Sighting Location (if possible attach a map showing the location):
County: Waterbody:

Landowner/Manager:

Describe location (Relationship to nearby road intersection, pier, milemarker, buoy, other landmarks)

If possible, please provide map information (You choose the system):

T____ R____ Sec____, _____1/4 of ____1/4, Meridian: H__ M___ S___
T____ R____ Sec____, _____1/4 of ____1/4, Meridian: H__ M___ S___

Quad Name: Source of Coordinates (GPS, topo map & type)
GPS Make and Model Horizontal Accuracy_____meters/feet

Datum: NAD27____ NAD83____ WGS84____
Coord. System Zone 10 ___ Zone 11___ or Geographic Latitude/Longitude)_____

Describe pest species population (approx. number of individuals or stems, area they occupy, any evidence of reproduction (flowering, juvenile animals, egg masses, etc).

Describe habitat: (e.g. plant community, associated plant species, host species, water depth, distance from bank, substrate characteristics (e.g. gravel, large rocks, silt, sand), etc.)

Photographs can be accessed at: (it's useful to include a ruler or a coin in photo to provide scale. It's also helpful to include photos of habitat, food plants showing damage from animal pests, and nearby landmarks)

This form is derived from the "Native Species Field Survey Form" Natural Diversity Data Base, California Department of Fish & Game and the "Maui County Report A Pest Online Report Form" Maui Co., HI